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मानक

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“जानने का अधिकार, जीने का अधिकार”

Mazdoor Kisan Shakti Sangathan

“The Right to Information, The Right to Live”

“पुराने को छोड़ नये के तरफ”

Jawaharlal Nehru

“Step Out From the Old to the New”

IS 8271-3-8 (1982): Quartz crystal units used for frequency control and selection, Part 3: Series BC for oscillators, Section 8: Quartz crystal unit type BC-08 [LITD 5: Semiconductor and Other Electronic Components and Devices]



“ज्ञान से एक नये भारत का निर्माण”

Satyanarayan Gangaram Pitroda

“Invent a New India Using Knowledge”



“ज्ञान एक ऐसा खजाना है जो कभी चुराया नहीं जा सकता है”

Bhartrhari—Nitiśatakam

“Knowledge is such a treasure which cannot be stolen”

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Indian Standard

SPECIFICATION FOR QUARTZ CRYSTAL UNITS USED FOR FREQUENCY CONTROL AND SELECTION

PART III SERIES BC FOR OSCILLATORS

Section 8 Quartz Crystal Unit Type BC-08

0. General — This standard shall be used in conjunction with IS : 8271 (Part I)-1981 'Specification for quartz crystal units used for frequency control and selection : Part I General requirements and tests (first revision)'.

1. Outline and Dimensions — Holder outline shall conform to type BC (see sheet No. 5 of IS : 4570-1968 'Specification for crystal holders').

2. Marking — See 8 of IS : 8271 (Part I)-1981.

3. Material Construction and Workmanship — See 7 of IS : 8271 (Part I)- 1981.

4. Test Schedule and Detail Requirements

4.1 General Conditions for Test — See 9.2 of IS : 8271 (Part I)-1981.

4.2 Test Schedule — The sequence and grouping of tests for type, routine and acceptance tests shall be as per 9.1 of IS : 8271 (Part I)-1981.

4.3 Detail Requirements — The detail requirements applicable to this particular type of crystal unit shall be as specified in Table 1.

TABLE 1 DETAIL REQUIREMENTS OF QUARTZ CRYSTAL UNIT TYPE BC-08

SI No.	Characteristic	Requirement
(1)	(2)	(3)
i)	Type of holder	BC (See 1)
ii)	Frequency range	17 to 65 MHz
iii)	Frequency tolerance:	
	a) Over operating temperature range	± 30 ppm
iv)	Resonance resistance	40 ohms, Maximum
v)	Mode of oscillation	Third overtone
vi)	Load capacitance	Infinity (Series)
vii)	Capacitance shunt	7 pF, Maximum
viii)	Operating temperature range	-20 to $+70^{\circ}\text{C}$
ix)	Test set, calibration values and rated drive level	See Table 2
x)	Shock [as per 9.15 (severity A) of IS : 8271 (Part I)-1981]:	
	a) Frequency change permitted	± 5 ppm
	b) Resonance resistance change permitted	± 10 percent
xi)	Vibration [as per 9.16.1 (severity A) of IS : 8271 (Part I)- 1981]:	
	a) Frequency change permitted	± 5 ppm
	b) Resonance resistance change permitted	± 10 percent
xii)	Temperature cycling:	
	a) Frequency change permitted	± 5 ppm
	b) Resonance resistance change permitted	± 10 percent
xiii)	Temperature run:	
	a) Frequency change permitted	± 5 ppm
	b) Resonance resistance change permitted	± 10 percent
xiv)	Ageing	
	Frequency change permitted	5ppm

Adopted 14 June 1982

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TABLE 2 TEST SET, CALIBRATION VALUES AND RATED DRIVE LEVEL

[Table -1, Item - (ix)]

Frequency Range	Calibration, Values		Rated Drive Level
	Resistance	Resistor Voltage Drop	
MHz	Ohms	V	mW
(1)	(2)	(3)	(4)
From 17 to 65	40	0.28	2.0 ± 0.4
Test Set TS-683/TSM			